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Plan Text: The United States federal government should substantially increase funding for high-speed rail transportation in the United States.

Contrails Advantage

Airplane traffic is expected to at least double by 2050 – increases emissions

Tyson 06 (Peter Tyson, editor in chief of NOVA Online, 04-18-06, “The Contrail Effect,” http://www.pbs.org/wgbh/nova/space/contrail-effect.html

I've always wanted to hate contrails, the "condensation trails" streaming out from behind jets. They're man-made. They force lines on nature, which knows no lines. They arise out of pollution, and they generate visual pollution—aircraft graffiti that can erase blue from the sky and light from the sun. All good reasons to despise these artificial clouds. But I don't. I've always been drawn to them. When I see one above, I like to run my eye along its length until I find the plane, a tiny silver toy. I like to wonder at the blank space between the plane and the start of the contrail—emptiness full of potential—and then to see the churning new cloud as it forms, a tumbling cascade. When the roiling slows and the newborn cloud settles into a contrail proper, I admire its perfection: a straight white line sharply etched against the blue. Even when numerous contrails made fat by the wind crisscross the sky, I don't mind. Contrails, the man-made clouds left in the wake of jet aircraft, may alter climate, particularly regionally, though to what degree remains unclear. EnlargePhoto credit: Courtesy U.S. Air Force Well, I might now. After a lifetime of enjoying contrails, it came as a surprise to me to learn recently that something so ephemeral may not be a harmless by-product of the jet age but may in fact impact the climate. This is of particular concern in well-traveled air corridors, where contrails by the hundreds can spread into man-made cirrus clouds that can both block sunlight from reaching the Earth and trap radiated heat from escaping to space. Whether contrails cause a net cooling or a net warming, even whether their effect is something to worry about within the greater general concern about climate change, remains unclear. But with air traffic expected to double or even triple by 2050, leading contrail researchers say the influence of these artificial clouds cannot be ignored.

Contrails increase air pollution significantly

LaMarco 10, Nicky LaMarco edited by Niki Fears, 03-01-10, “How Aircraft Trails or Contrails are Effecting the Environment” http://www.brighthub.com/environment/science-environmental/articles/24619.aspx

Similar to the automobile exhaust fumes, the aircraft trails, known as contrails, are seen to be causing environmental warming and atmospheric pollution. As per a recent study, global air traffic is presently increasing almost by 3.5 percent per year. Many of these are long-haul extra flights that fly in high-altitude and form contrails. It is estimated that by 2050 these contrails will have greater impact on global warming by forming more CO2 than aircraft engines.

The implementation of maglev will decrease air transportation – reduces emissions

Johnson 11, Larry R. Johnson, director of the Center for Transportation Research at the Department of Energy’s Argonne National Laboratory, was a member of the Maglev Technology Advisory Committee that reported to the U.S. Senate Committee on Environment and Public Works, 06-08-11,“Putting Maglev on Track,” http://www.issues.org/19.4/updated/johnson.pdf

As even the infrequent flyer knows, air travel has degraded from an enjoyable experience into an often grueling one. Chicago’s O’Hare airport alone tallies more than 12 million hours of passenger delay annually, the equivalent of 1,400 passengers standing idle around the clock. And delays in the largest cities affect other places; the Federal Aviation Administration (FAA) calculated that the cost of delays in 1986 for passengers and the airlines nationwide totaled $5 billion—$2 billion of which (or some 7 percent of the airlines’ operating costs) were in wasted fuel and extra labor charges. Our air traffic system is choking on its own success. And things will get worse. By 1996, the FAA predicts that unless the air traffic system adds significant capacity, the number of severely congested airports will grow from today’s 18 to 32. Such expansion appears unlikely; citizens’ groups around the country are resisting the construction of new airports, citing noise and emissions. The last major airport built was Dallas-Ft. Worth, in 1974. The planned Denver airport has taken over 10 years just to get site approval. Local officials vetoed a new airport for Miami, which has the twelfth most congested facility in the country The most sensible solution to this mounting problem lies in the seemingly sci-fi technology of magnetically levitated, or maglev, trains. In a maglev system, magnetic fields lift, guide, and propel vehicles along a guideway at speeds of 250 to 300 mph. The magnetic forces can come either from conventional electromagnets or, in a design that many researchers regard as superior, by coils of superconducting wire. Although maglev technology was of intense interest in the United States as early as 20 years ago, only Japan and West Germany now operate full-scale prototypes. Maglev is an elegant technology, with many advantages over conventional means of transit. Because the maglev vehicles never touch the guideway, they make little noise and incur low maintenance costs. Maglev trains are virtually immune to adverse weather, which is the single largest cause of airline delays. According to a report issued last summer by the Maglev Technology Advisory Committee—a group organized by Senator Daniel Patrick Moynihan with members from industry, national laboratories, universities, and government agencies—the use of maglev would reduce emissions of air pollutants such as hydrocarbons, carbon monoxide, nitrogen oxides, and particulates. And it would even help retard the trend toward global warming, putting out one-fourth as much carbon dioxide as airplanes while consuming only a fourth as much energy per passenger-mile. A maglev system would not waste land resources, either According to Senator Moynihan’s committee, a two-way maglev system would require only 50 feet of space and could be elevated to clear existing bridges and overpasses. Thus guideways could be built within the existing rights-of-way along the Interstate Highway System, avoiding the need for costly and disruptive land purchases. A single maglev line would have a capacity equal to 6 lanes of interstate highway; a maglev network radiating from a city would have the passenger capacity of a major airport.

Reducing a fraction of air transportation helps solve for air pollution

Plumer 12, Brad Plumer, reporter at the Washington Post writing about domestic policy, particularly nergy and environmental issues, 03-15-12, “What’s going to kill us in 2050? Air pollution – and lots of it,” http://www.washingtonpost.com/blogs/ezra-klein/post/whats-going-to-kill-us-in-2050-air-pollution--and-lots-of-it/2012/03/15/gIQAgiDgES\_blog.html

Air pollution tends to get wildly underrated as a public health concern. Everyone knows malaria is deadly. Or that access to clean water is a problem. And yet, in the next few decades, air pollution will kill far more people than both of those things combined, according to a new report. On Wednesday, the OECD released its “Environmental Outlook to 2050,” which contained a few spots of cheery news. Humanity is making steady progress against malaria. Worldwide, the number of deaths from the disease are expected to fall by half by 2050. And fewer people will die from unsafe drinking water and poor sanitation in the future. But the number of deaths caused by air pollution — which includes ground-level ozone, particulate matter, and “indoor pollution” — are expected to skyrocket, killing more than 6 million people per year by mid-century. Here’s the chart: (OECD Environmental Outlook 2050) The situation is particularly acute in India. In 2010, about 90 people out of every million died prematurely from ground-level ozone, which is formed when emissions from power plants, vehicles and factories react with sunlight. The resulting pollution can “trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma.” And by 2050, according to the OECD, about 130 Indians out of every million are likely to die prematurely from exposure. Wealthy countries aren’t immune, either, especially as places like the United States and Europe age, given that the elderly are especially sensitive to ozone pollution. While it’s technically feasible to reduce ground-level ozone, these control measures tend to be pricey and controversial — the Obama White House nixed stricter ozone standards last September for this very reason. Other pollutants, however, could prove much easier to tackle. Take particulate pollution, which the OECD expects will kill 3.6 million people per year by 2050. A lot of lung-damaging particulate matter comes from the burning of fossil fuels. And actions to curb them can prove quite cost-effective. The EPA’s new regulations on mercury, for instance, will reduce U.S. particulate pollution, as coal plants install new scrubbers. That, the agency estimates, will save an estimated 11,000 lives per year by 2016 and deliver between $36 billion to $89 billion per year in health benefits. And all for a cost of $9.6 billion per year. Another example: The OECD lists “indoor pollution” as a major cause of death in the developing world, a category that includes black carbon soot from biomass-burning cookstoves. This is fixable: Cleaner cookstoves that run on solar power or burn fuel cleanly already exist. Indeed, it’s such a no-brainer notion that even Sen. James Inhofe (R-Okla.) has co-sponsored a bill in the U.S. Senate to aid black-carbon reduction projects abroad. One last thing to point out, meanwhile, is that cleaning up many of these pollutants will have a complicated effect on climate change — another major environmental problem that the OECD highlights. On the one hand, mopping up ground-level ozone and black carbon is a quick, easy way to limit global warming (black carbon particles, in particular, have a nasty habit of settling in the Arctic, absorbing sunlight and sizzling right through the ice). Yet some particulates actually reflect sunlight back into space, and curbing them might lead to additional warming in the short term. That said, climate scientists tend to find that this all pales besides the effects of greenhouse gasess.

Air pollution causes extinction

Driesen ’03, David, Professor of Law at Syracuse, Fall/Spring 2003, Buffalo Environmental Law Journal, Lexis Nexis

Air pollution can make life unsustainable by harming the ecosystem upon which all life depends and harming the health of both future and present generations. The Rio Declaration articulates six key principles that are relevant to air pollution. These principles can also be understood as goals, because they describe a state of affairs [\*27] that is worth achieving. Agenda 21, in turn, states a program of action for realizing those goals. Between them, they aid understanding of sustainable development's meaning for air quality. The first principle is that "human beings. . . are entitled to a healthy and productive life in harmony with nature", because they are "at the center of concerns for sustainable development." n3 While the Rio Declaration refers to human health, its reference to life "in harmony with nature" also reflects a concern about the natural environment. n4 Since air pollution damages both human health and the environment, air quality implicates both of these concerns. n5

Economy Advantage

Economic recovery is in a fragile state

Samson 12 (Samson, Adam, a writer for Fox News, 7/16/12, Fox News, Gloomy Economic Data Sap Wall Street's Enthusiasm,

http://www.foxbusiness.com/markets/2012/07/16/gloomy-economic-data-sap-wall-street-enthusiasm/#ixzz20tC63kN)

After posting a big rally on Friday, the markets kicked the week on a cautious note as traders reacted to another round of pessimistic news on the world economy. Today's Markets The Dow Jones Industrial Average fell 49 points, or 0.39%, to 12727, the S&P 500 slipped 3.1 points, or 0.23%, to 1354 and the Nasdaq Composite dipped 11.5 points, or 0.4%, to 2897. This week is set to be a busy one from an economic standpoint. There are a slew of closely-watched economic reports on tap, and Federal Reserve Chairman Ben Bernanke is set to testify before Congress on Tuesday. A report from the Commerce Department showed retail sales falling 0.5% in June from May, surprising economists who were expecting a 0.2% gain. Excluding the auto segment, sales were down 0.4%; economists had expected sales to remain flat. "The weakness across sectors in June was broad based, which implies a general softening in consumer spending," analysts at Nomura wrote in a note to clients following the report. Echoing that sentiment, IHS Global Insight Senior Principal Economist Chris Christopher wrote in a research note that "retail sales have hit a brick wall, plain and simple." He added: "The American consumer is not in a healthy state." The International Monetary Fund revised its outlook for global growth down from its April 2012 forecast by 0.1 percentage point to 3.5% for 2012 and by 0.2 percentage point to 3.9% for 2013. The IMF also cut its U.S. forecast by 0.1 percentage point for 2012 to 2% and revised it lower by 0.1 percentage point to 2.3% for 2013. "In the past three months, the global recovery, which was not strong to start with, has shown signs of further weakness," the IMF said in a report, noting that downside risks "loom large."

Federal investment is necessary to facilitate continued HSR job growth – 1.3 million jobs

Marchetti 11( Marchetti, Nino, editor in chief of Earthtechling, 04/14/11, TG Daily, High Speed Rail could create 1.3 million jobs, http://www.tgdaily.com/sustainability-features/55361-high-speed-rail-could-create-13-million-jobs)

A new study out recently from the American Public Transportation Association (APTA) suggests kneecapping high speed rail on the federal level might not be the best move at the moment. Why? Because the APTA study suggests the national build out of a 21st century rail system, much like is going on in places like China, could create as many as 1.3 million related jobs. The APTA is a nonprofit international association of 1,500 public and private member organizations, engaged in the areas of bus, paratransit, light rail, commuter rail, subways, waterborne services, and intercity and high-speed passenger rail, so certainly it has vested interest in seeing high speed rail succeed. The study it funded believes that the multi-billion dollar federal investment, now significantly reduced in scope, "will be the catalyst for attracting state, local and private capital which will result in the support and creation of even more jobs." APTA believes that for each $1 billion invested in high-speed rail projects, it will support and create 24,000 jobs. Part of the job scenario painted by this report includes not only a large increase in construction jobs, but also "the sustainable, long-term growth of new manufacturing and service jobs across the country." It was noted by the APTA, in considering how high speed rail might help jump start the domestic economy, that the Economic Development Research Group for the U.S. Conference of Mayors studied the business impact of high-speed rail investment in different urban regions.

Jobs key to the economy

Newport 12, Frank Newport, writer for Gallup.com, 07-19-12, “Americans Focus on Jobs as Best Way to Improve U.S. Economy,” http://www.gallup.com/poll/155768/Americans-Focus-Jobs-Best-Improve-Economy.aspx

PRINCETON, NJ -- Asked to name the most important thing that could be done to improve the U.S. economy is, more than one in four Americans (28%) suggest creating more or better jobs, along with another 9% who would reduce the outsourcing of jobs. Americans also suggest decreasing taxes (11%), improving the government (8%), or balancing the government's budget (7%) as ways to improve the economy. There is no shortage of opinions on this topic. All but 7% of those interviewed in the July 9-12 Gallup poll were able to come up with a suggestion for improving the economy. While roughly a quarter of the responses were spread out across a variety of topics, each mentioned by no more than 3% of Americans, the employment situation in the U.S. was clearly the most prevalent thought. This is consistent with the finding that unemployment and the economy are the most important problems facing the country. It is not clear exactly how those respondents who said "jobs" would recommend going about creating new or better jobs, but the prevalence of this response category underscores Americans' conviction that jobs are the key to an improved economy. A number of the other response categories involve actions that could be taken by the government, including decreasing taxes, balancing the budget, offering small business incentives, increasing economic stimulus spending, increasing the minimum wage, ending wars, controlling illegal immigration, and improving foreign relations. Another 8% suggested improvements in the way government operates, while another 3% said that electing a new president would be the best way to improve the economy. Notable by their absence were mentions of entrepreneurship or starting new companies as the best way to improve the economy, along with virtually any mention of increasing taxes on the rich or wealthy. There are not highly significant differences in the suggestions offered by Democrats, independents, and Republicans. At least one-quarter of each partisan group suggested that the best way to improve the economy is by creating new or better jobs. Republicans are more likely than Democrats to mention tax cuts and, in particular, to mention balancing the budget.

Economic decline causes war – miscalc, resource wars and political instability

Jedediah Royal, Director of Cooperative Threat Reduction at the U.S. Department of Defense, 2010, “Economic Integration, Economic Signaling and the Problem of Economic Crises,” Economics of War and Peace: Economic, Legal and Political Perspectives, ed. Goldsmith and Brauer, p. 213-215

Less intuitive is how periods of economic decline may increase the likelihood of external conflict. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent slates. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level. Pollins (2008) advances Modelski and Thompson's (19%) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the often bloody transition from one pre-eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (sec also Gilpin. 1981) that leads to uncertainty about power balances, increasing the risk of miscalculation (Fearon, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner, 1999). Separately. Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level. Copeland's (1996. 2000) theory of trade expectations suggests that 'future expectation of trade' is a significant variable in understanding economic conditions and security behaviour of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectations of future trade decline, particularly for difficult lo replace items such as energy resources, [lie likelihood for conflict increases. as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because il triggers protectionist moves by interdependent states.4 Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularly during periods of economic downturn. They write, The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other. (Blomberg & I less. 2002. p. 89) Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg. Hess. & Wccrapana. 2004). which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a silting government. "Diversionary theory' suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to fabricate external military conflicts to create a 'rally around the flag' effect. Wang (1996), DcRoucn (1995), and Blomberg. Mess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DcRoucn (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak Presidential popularity, are statistically linked to an increase in the use of force. In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas political science scholarship links economic decline with external conflict at systemic, dyadic and national levels.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention. This observation is not contradictory to other perspectives that link economic interdependence with a decrease in the likelihood of external conflict, such as those mentioned in the first paragraph of this chapter. Those studies tend to focus on dyadic interdependence instead of global interdependence and do not specifically consider the occurrence of and conditions created by economic crises. As such, the view presented here should be considered ancillary to those views.

Oil Advantage

Heg is threatened by the amount of money spent on foreign oil

Klare 11

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How America's Decline Is Linked to Oil

September 15, 2011

<http://www.alternet.org/story/152423/how_america%27s_decline_is_linked_to_oil/> MPARA

America and Oil. It’s like bacon and eggs, Batman and Robin. As the old song lyric went, you can’t have one without the other. Once upon a time, it was also a surefire formula for national greatness and global preeminence. Now, it’s a guarantee of a trip to hell in a hand basket. The Chinese know it. Does Washington? America’s rise to economic and military supremacy was fueled in no small measure by its control over the world’s supply of oil. Oil powered the country’s first giant corporations, ensured success in World War II, and underlay the great economic boom of the postwar period. Even in an era of nuclear weapons, it was the global deployment of oil-powered ships, helicopters, planes, tanks, and missiles that sustained America’s superpower status during and after the Cold War. It should come as no surprise, then, that the country’s current economic and military decline coincides with the relative decline of oil as a major source of energy. If you want proof of that economic decline, just check out the way America's share of the world's gross domestic product has been steadily dropping, while its once-powerhouse economy now appears incapable of generating forward momentum. In its place, robust upstarts like China and India are posting annual growth rates of 8% to 10%. When combined with the growing technological prowess of those countries, the present figures are surely just precursors to a continuing erosion of America’s global economic clout. Militarily, the picture appears remarkably similar. Yes, a crack team of SEAL commandos did kill Osama bin Laden, but that single operation -- greeted in the United States with a jubilation more appropriate to the ending of a major war -- hardly made up for the military’s lackluster performance in two recent wars against ragtag insurgencies in Iraq and Afghanistan. If anything, almost a decade after the Taliban was overthrown, it has experienced a remarkable resurgence even facing the full might of the U.S., while the assorted insurgent forces in Iraq appear to be holding their own. Meanwhile, Iran -- that bête noire of American power in the Middle East -- seem as powerful as ever. Al Qaeda may be on the run, but as recent developments in Egypt, Libya, Syria, Yemen, and unstable Pakistan suggest, the United States wields far less clout and influence in the region now than it did before it invaded Iraq in 2003.

New Drilling can’t solve- not enough oil in even restricted areas

Martin 07 (Martin, Phyllis, part of the Energy Information Administration, 2007, EIA, Impacts of Increased Access to Oil and Natural Resources in the Lower 48 Federal Outer Continental Shelf, [**http://www.eia.gov/oiaf/aeo/otheranalysis/ongr.html**](http://www.eia.gov/oiaf/aeo/otheranalysis/ongr.html)**) MPARA**

The projections in the OCS access case indicate that access to the Pacific, Atlantic, and eastern Gulf regions would not have a significant impact on domestic crude oil and natural gas production or prices before 2030. Leasing would begin no sooner than 2012, and production would not be expected to start before 2017. Total domestic production of crude oil from 2012 through 2030 in the OCS access case is projected to be 1.6 percent higher than in the reference case, and 3 percent higher in 2030 alone, at 5.6 million barrels per day. For the lower 48 OCS, annual crude oil production in 2030 is projected to be 7 percent higher—2.4 million barrels per day in the OCS access case compared with 2.2 million barrels per day in the reference case (Figure 20). Because oil prices are determined on the international market, however, any impact on average wellhead prices is expected to be insignificant.

High-Speed rail quickly decreases dependence on oil

Perl 11 (Perl, Anthony, a Professor of Urban Studies and Political Science at Simon Fraser University, 11/18/11, CNN, How Green is HSR, <http://www.cnn.com/2011/11/18/world/how-green-is-hsr/index.html>) MPARA

Any debate about the future of high-speed rail must consider where this mobility option fits into the 'big picture' of how transportation systems meet looming economic, energy and environmental challenges. In a world where 95% of motorized mobility is currently fueled by oil, high-speed rail offers a proven means of reducing dependence on this increasingly problematic energy source. This value of using proven electric propulsion technology should not be underestimated when both the time and money to deploy energy alternatives are in short supply. In our recent book Transport Revolutions, Richard Gilbert and I documented the economic, environmental and political dividends to be gained from replacing the internal combustion engines powering today's aircraft, cars, and motor vehicles with traction motors that can be powered by multiple energy sources delivered through the electric grid. Since electricity is an energy carrier, it can be generated from a mix of sources that incorporate the growing share of geothermal, hydro, solar, and wind energy that will be produced in the years ahead. And because electric motors are three to four times more efficient than internal combustion engines, an immediate improvement will precede introducing renewable energy into transportation. Grid-connected traction offers the only realistic optionfor significantly reducing oil use in transportation over the next 10 years. If such a shift does not begin during this decade, the risk of a global economic collapse and/or geo-political conflict over the world's remaining oil reserves would become dangerously elevated. Making a significant dent in transportation's oil addiction within 10 years is sooner than fuel cells, biofuels, battery-electric vehicles and other alternative energy technologies will be ready to deliver change. Biofuels that could power aircraft now cost hundreds of dollars per gallon to produce. Batteries that a big enough charge to power vehicles between cities are still too big and expensive to make electric cars and buses affordable. But grid-connected electric trains have been operating at scale and across continents for over a century. And when the Japanese introduced modern high-speed trains through their Shinkansen, in 1964, the utility of electric trains was greatly extended. Since the 1980s, countries across Asia and Europe have been building new high-speed rail infrastructure to deploy electric mobility between major cities up to 1,000 kilometers apart. For intercity trips between 200 and 1,000 kilometers, high-speed trains have proven their success in drawing passengers out of both cars and planes, as well as meeting new travel demand with a much lower carbon footprint than driving or flying could have done. If we are serious about reducing oil's considerable risks to global prosperity and sustainability, we will not miss the opportunity offered by high-speed rail to decrease transportation's oil consumption sooner, rather than later.

Heg is key to global stability and accesses every major impact – decline causes global nuclear war

**Barnett**, Former Senior Strategic Researcher and Professor @ Naval War College**, 11** (Thomas, Former Senior Strategic Researcher and Professor in the Warfare Analysis & Research Department, Center for Naval Warfare Studies, U.S. Naval War College American military geostrategist and Chief Analyst at Wikistrat., worked as the Assistant for Strategic Futures in the Office of Force Transformation in the Department of Defense, “The New Rules: Leadership Fatigue Puts U.S., and Globalization, at Crossroads,” March 7 <http://www.worldpoliticsreview.com/articles/8099/the-new-rules-leadership-fatigue-puts-u-s-and-globalization-at-crossroads>)

Events in Libya are a further reminder for Americans that we stand at a crossroads in our continuing evolution as the world's sole full-service superpower. Unfortunately, we are increasingly seeking change without cost, and shirking from risk because we are tired of the responsibility. We don't know who we are anymore, and our president is a big part of that problem. Instead of leading us, he explains to us. Barack Obama would have us believe that he is practicing strategic patience. But many experts and ordinary citizens alike have concluded that he is actually beset by strategic incoherence -- in effect, a man overmatched by the job. It is worth first examining the larger picture: We live in a time of arguably the greatest structural change in the global order yet endured, with this historical moment's most amazing feature being its relative and absolute lack of mass violence. That is something to consider when Americans contemplate military intervention in Libya, because if we do take the step to prevent larger-scale killing by engaging in some killing of our own, we will not be adding to some fantastically imagined global death count stemming from the ongoing "megalomania" and "evil" of American "empire." We'll be engaging in the same sort of system-administering activity that has marked our stunningly successful stewardship of global order since World War II. Let me be more blunt: As the guardian of globalization, the U.S. military has been the greatest force for peace the world has ever known. Had America been removed from the global dynamics that governed the 20th century, the mass murder never would have ended. Indeed, it's entirely conceivable there would now be no identifiable human civilization left, once nuclear weapons entered the killing equation. But the world did not keep sliding down that path of perpetual war. Instead, America stepped up and changed everything by ushering in our now-perpetual great-power peace. We introduced the international liberal trade order known as globalization and played loyal Leviathan over its spread. What resulted was the collapse of empires, an explosion of democracy, the persistent spread of human rights, the liberation of women, the doubling of life expectancy, a roughly 10-fold increase in adjusted global GDP and a profound and persistent reduction in battle deaths from state-based conflicts. That is what American "hubris" actually delivered. Please remember that the next time some TV pundit sells you the image of "unbridled" American military power as the cause of global disorder instead of its cure. With self-deprecation bordering on self-loathing, we now imagine a post-American world that is anything but. Just watch who scatters and who steps up as the Facebook revolutions erupt across the Arab world. While we might imagine ourselves the status quo power, we remain the world's most vigorously revisionist force. As for the sheer "evil" that is our military-industrial complex, again, let's examine what the world looked like before that establishment reared its ugly head. The last great period of global structural change was the first half of the 20th century, a period that saw a death toll of about 100 million across two world wars. That comes to an average of 2 million deaths a year in a world of approximately 2 billion souls. Today, with far more comprehensive worldwide reporting, researchers report an average of less than 100,000 battle deaths annually in a world fast approaching 7 billion people. Though admittedly crude, these calculations suggest a 90 percent absolute drop and a 99 percent relative drop in deaths due to war. We are clearly headed for a world order characterized by multipolarity, something the American-birthed system was designed to both encourage and accommodate. But given how things turned out the last time we collectively faced such a fluid structure, we would do well to keep U.S. power, in all of its forms, deeply embedded in the geometry to come.

Solvency

Maglev is cost and energy effective- solves long distance transportation problems

Pavlov et. al. 7 (Professor Oleg Pavlov, SSPS, Project Advisor, Associate Professor of Economics and System Dynamics at Worchester Polytechnic Institute; Alihusain Yusuf Sirohiwala, Senior Tutor at Dept. of Electrical and Computer Engineering at WPI; Ananya Tandon, Quality Engineer at Boston Scientific Studies; Raj Vysetty, Manager, E-Commerce and Analytics at Dynergy, Inc.;  “Feasibility and Economic Aspects of Vactrains.” 11 October 2007. http://www.wpi.edu/Pubs/E-project/Available/E-project-101207-130034/unrestricted/IQP.pdf.).

3.2.5 Advantages of the Maglev.The major advantages of the maglev are mentioned below. Speed: Speed is unarguably one of the biggest advantages of the maglev train. The Maglev can easily reach speeds around 500km/hr. Even though the conventional high speed trains have traveled at similar speeds in test conditions, but very rarely do they cross the 300km/hr in commercial operation. (Larry Johnson)Operation (Weather conditions): The operation of regular trains will be affected by inclement weather conditions such as snow storms or other inevitable circumstances. However, there is almost no chance of the weather affecting the operation of the maglev trains. (Larry Johnson). Maintenance: The maintenance costs of the maglev will be considerably lower than the conventional rail system. As the train is never in contact with the track, there is no mechanical wear on the suspension system of the train and the track itself. The load of the entire train is uniformly distributed over the length of the train and not at the wheels as is the case with conventional trains. This is another factor that increases the life time of the maglev. (Freeman). Energy: Another important advantage of the Maglev would be the lower use of energy. On a passenger mile basis, the energy used by the Maglev is roughly about 25 percent of the energy used by aircraft and other modes of transport. More importantly, the train runs on electrical energy which can be obtained from hydroelectric generation or nuclear power and hence doesn’t affect the petroleum resources which are dwindling currently in most countries, especially the United States (Powell). Economics: Although, a heavy capital is required to start the maglev system, the operation costs of the maglev will be much lower compared to airplanes. (Larry Johnson). Pollution control: Maglev does not emit pollution. The Maglev does not emit any carbon dioxide or other gases as it runs on electricity. Even though electricity is produced from coal and other means, the resulting carbon dioxide emission is much less when compared to other modes (Freeman).

High Speed Rail creates jobs, reduces congestion, and decreases oil consumption

Melaniphy 12 (Melaniphy, Michael, President and CEO of American Public Transportation Association, 07/18/12, Transportation National Journal, High-Speed Rail Solves Tough Questions, <http://transportation.nationaljournal.com/2012/07/highspeed-rail-in-california.php?rss=1>)

High-speed rail provides the answer to many of the challenges we face today in America. It creates jobs, expands mobility, reduces congestion and decreases our dependence on foreign oil. Today, traffic congestion costs $140 billion in lost time and productivity. On the other hand, every $1 we invest in high-speed rail creates $4 in economic benefits, in addition to providing transportation relief to a tight area. The funding bill signed by Gov. Brown today is expected to create 600,000 full-time construction jobs over the course of building the project and 450,000 permanent new jobs from economic growth over the next 25 years. By creating a high-speed rail option, we will keep billions of dollars in the US economy through decreased oil consumption and provide an energy efficient solution for generations to come. Implementation of high-speed rail will make the entire transportation system – air, road and rail – work better as an interconnected system. This program will connect major cities that currently do not have significant air service. It will connect suburban commuting patterns with central cities, and will connect the largest central cities while reducing airport congestion. These aren’t just benefits for San Francisco or Los Angeles—they are solutions that benefit the entire state.

A strong signal of federal commitment to HSR is critical to generate investment and confidence in the industry. A federal HSR plan can generate independent revenue to pay for the cost

Todorovich, Schned and Lane 2011 (Petra, director of America 2050, Daniel – associate planner for America 2050, and Robert, High-Speed Rail: International Lessons for U.S. Policy Makers, Policy Focus Report, Lincoln Institute of Land Policy, p. 46-47)

Like other modes of transportation and public goods, high-speed rail generally does not pay for itself through ticket fares and other operating revenues. Reliable federal funding is needed for some portion of the upfront capital costs of constructing rail infrastructure, but operating revenues frequently cover operating and maintenance costs. Two well-known examples of highly successful high-speed rail lines—the Tokyo– Osaka Shinkansen and Paris–Lyon TGV—generate an operating proﬁt (JR Central 2010; Gow 2008). German high-speed trains also have been proﬁtable on an operating basis, with revenues covering 100 percent of maintenance costs and 30 percent of new track construction (University of Pennsylvania 2011). Moreover, as long as the HSIPR Program combines funding for both high-speed and conventional rail, federal grants, not loans, will be required to support its initiatives. Since conventional rail services are likely to need continued operating subsidies, it is even more important to secure a federal funding source for capital infrastructure costs. A small but reliable transportation tax for high-speed and conventional passenger rail would demonstrate the federal government’s commitment to a comprehensive rail program, giving states the assurance they need to plan high-speed rail projects and equipment manufacturers the conﬁdence they require to invest in the industry. The challenge of securing revenue for rail investments is closely linked to the chal-lenge of funding the nation’s entire surface transportation program. While in the past revenues from the federal motor fuel taxes were sufﬁcient to cover the nation’s highway and transit priorities, the 18.4 cents per gallon gasoline tax has been ﬁxed since 1993, while the dollar has lost one-third of its purchasing power in that time (RAND Corporation 2011). New sources of sustainable revenue are needed to support not only high-speed and conventional passenger rail but also all of the nation’s surface transportation obligations, including highways and transit. In recent years, Congress has addressed the funding shortfall with short-term ﬁxes by transferring general fund revenues to the highway trust fund. However, the need to ﬁnd a long-term solution presents the opportunity to address existing surface transportation needs and high-speed and passenger rail all at once. At some point in the near future, Congress must address the shortfall in national transportation funding. At that time legislators could also dedicate revenues for high-speed and passenger rail as part of the surface transportation program, generated by a variety of small increases or reallocations of current transportation-related fees to provide at least $5 billion in annual funds. Several proposals are currently being considered. • Raise the gas tax by 15 cents a gallon (The National Commission on Fiscal Responsibility and Reform, 2010) or more. Each additional cent of gas tax generates approximately $1.4 billion annually (AASHTO 2011). Several cents could be devoted to passenger rail. • Add a $1 surcharge on current passenger rail tickets to produce approximately $29 million annually (Amtrak 2011d). Though this is a relatively small amount of revenue, it could become an important source of funds for expanding and main-taining the system as passenger rail ridership grows. • Or, shift from a national gas tax to a percentage tax on crude oil and imported reﬁned petroleum products consumed in the United States to fund all the nation’s transportation needs (RAND Corporation 2011). RAND estimated that an oil tax of 17 percent would generate approximately $83 billion a year (at midsummer 2010 prices of $72 per barrel). Five billion dollars of this amount could be dedicated to passenger rail.

Long-term and predictable federal funding is necessary to encourage private investment

Cotey, June 2011 (Angela – associate editor of Progressive Railroading, California HSR Officials Contend with Criticism, Progressive Railroading, p. [http://www.progressiverailroading.com/high\_speed\_rail/article/California-HSR-officials-contend-with-criticism--26838#](http://www.progressiverailroading.com/high_speed_rail/article/California-HSR-officials-contend-with-criticism--26838))

But for CHSRA to achieve its larger vision, the authority will need tens of billions of dollars in additional funding — federal dollars included. The uncertainty surrounding the near- and long-term prospects for federal funding don’t affect CHSRA’s “day to day,” but it could impact the private sector’s willingness to pony up funds to help California build its sprawling system, says Barker. “It’s a little bit ironic because there are a lot of people, especially in Congress, saying they want private-sector participation, but private firms right now are seeing volatility and political strife, and that’s not an environment in which the private sector will want to participate,” he says. That’s why it’ll be critical for Congress to create a program to fund high-speed rail on an ongoing basis. And as long as the private sector is confident the federal government will pony up more funds for HSR development, there are plenty of firms interested in securing a stake in California’s project.

Add-On: Global Warming

Contrails produced from aircraft exhaust cause radiative forcing

Nojoumi et al. 08, H. Nojoumi, I. Dincer, G. F. Naterer, Facutly of Engineering and Applied Science, University of Ontario Institute of Technology, 11-10-08, “Greenhouse gas emissions assessment of hydrogen and kerosene-fueled aircraft propulsion” http://ac.els-cdn.com/S0360319908015048/1-s2.0-S0360319908015048-main.pdf?\_tid=03e6cdf7a240f9f4ea2a1390c2d2287e&acdnat=1342570116\_5de56e2f9b825604398b5b024b8b4b28

Condensation trails, or contrails, produced from high-altitude aircraft exhaust may affect climate because they can persist for many hours, depending on their condition and local weather patterns. Like their natural counterparts, these anthropogenic cirrus clouds reﬂect solar radiation and absorb and emit thermal infrared radiation, causing radiative forcing. Aviation in general has the potential to change cirrus clouds in a number of ways. Contrails do not always evaporate after a short time. If the local atmosphere is supersaturated with respect to ice, the clouds will form into larger cirrus clouds called contrail cirrus, which cannot be distinguished from contrails, if the concentration is unknown. A/C directly emits soot and particulates. These particles eventually are transformed into clouds which may trigger a longer lasting CC. It is projected that the concentration of aerosols will remain relatively low until at least 2050. But their inﬂuence on cloud formation can help enhance the cloud structure and change the radiative forcing. The global warming potential, GWP, can be determined as follows (e.g., [16,19,26]): GWPi ¼ Ei ðTÞ ECO2 ðTÞ (3) GWP ¼ RN 0 fi ðtÞCi ðdtÞ RN 0 fc ðtÞCc ðdtÞ (4) Cc ðtÞ ¼ A0 þ Xn i¼1 Ai exp t si (5) Ei ¼ Z T 0 RFi se t=s ¼ RFi s 1 e T=s (6) The concept of radiative forcing as the radiative imbalance (Wm2 ) is caused by the addition of greenhouse gases. The drivers of RF include the direct solar radiation aerosols and the earth’s surface temperature changes. RF represents a stratospherically adjusted radiative ﬂux change evaluated at the tropopause. Positive RF leads to global mean surface warming and negative RF leads to surface cooling. They are calculated differently from changes in emissions, or changes in concentrations. The global mean concentration of CO2 in the atmosphere in 2005 was 377 ppm, leading to an RF of þ1.66 0.17] W/m2 (Table 8). Past emissions have a contribution of about three quarters of the current RF. The initial concentration of a greenhouse gas strongly affects the magnitude of radiative forcing. The radiative forcing is largest when the additional concentration is very low. Equation (3) and Fig. 7 show that the initial concentration of CO2 remains in the air for several thousands of years As shown in the comparison in Fig. 5, the maximum lifetime of water vapor is about 9 months. For 160.3 Mt of fuel burned, It can be shown that 1 ppm of CO2 is added into the atmosphere [23]. Fig. 8 illustrates the fuel consumption vs. distance travelled in the case study. (see radiative forcing associated with various components in Fig. 9)

Radiative forcing leads to global warming through the greenhouse effect

Schumann 01, Ulrich Schumann, Director and professor at the Institute of Atmospheric Physics, 08-27-01, “Effects of aircraft emissions on ozone, cirrus clouds, and global climate” http://ac.els-cdn.com/S1290095800800593/1-s2.0-S1290095800800593-main.pdf?\_tid=d41356daf207a026383ff55ad42a3349&acdnat=1342569664\_d37f9f4223532ec2a130bb7f6c773a4c

Contrails are visible line clouds that form from water emitted by aircraft flying in sufficiently cold air. Contrails form when the increase in relative humi- dity that occurs in the engine plume during mixing of the warm and moist exhaust gases with the colder ambient air reaches liquid saturation. The threshold temperature decreases with flight level AIR & SPACE EUROPE l VOL. 2 l No 3 - 2000 Ozone and Global Climate and increases with ambient humidity. Modern aircraft with higher overall propulsion efficiency cause contrails at slightly lower altitude @pre 3). Ice particles evaporate quickly and contrails remain short when forming in dry ambient air. The fractional global coverage by short contrails is less than 0.001% and hence of no importance to the climate. Contrails persist, sometimes for hours, and grow when the ambient air is very humid with humidity above ice saturation. Ice particles in such persis- tent contrails grow by uptake of water from the surrounding air. Based on MO- ZAIC data, about 10 to 20% of all jet air- craft flights occur in air masses that are humid enough to cause persistent omtrails. Icesupersaturation in these regions is often too small to allow cirrus to form naturally so aircraft act as a trigger to form cirrus clouds. Contrail clouds can be identified and discriminated from natural cirrus clouds in satellite data based on their linear shape at least up to some age depending on the ambient conditions. In 1996 and 1997, satellite data reveal that linear per- sistent contrails cover about 0.5 to 0.7% of the sky at noon over Europe in the annual average. The fraction of cirrus clouds with not-linear shape which origi- nated from old contrails or from aircraft induced particles is unknown. The mean global cover by linear contrails has been estimated to be 0.1% (possibly 0.02 to 0.2%) for 1992. Contrails cause a positive mean radiative forcing at the top of the atmosphere, in particular during night and over warm and bright surfaces. They reduce both the solar radiation reaching the surface and the amount of long wave radiation leaving the Earth to space. The radiative effects of contrails depend on their area coverage and optical depth, both of which are not well known. For 0.5% additional cirrus cloud cover regionally, one computes a regional temperature increase of the order 0.05 deg.K at the surface.

Global warming is real and anthropegenic - thousands of studies prove

Rahmstorf 08 (Stefan Rahmstorf, Potsdam Institute for Climate Impact Research, 2008, “Anthropegenic Climate Change: Revisiting the Facts”)

It is time to turn to statement B: human activities are altering the climate. This can be broken into two parts. The first is as follows: global climate is warming. This is by now a generally undisputed point (except by novelist Michael Crichton), so we deal with it only briefly.32 The two leading compilations of data measured with thermometers are shown in figure 3-3, that of the National Aeronautics and Space Administration (NASA) and that of the British Hadley Centre for Climate Change. Although they differ in the details, due to the inclusion of different data sets and use of different spatial averaging and quality control procedures, they both show a consistent picture, with a global mean warming of 0.8°C since the late nineteenth century. Temperatures over the past ten years clearly were the warmest since measured records have been available. The year 1998 sticks out well above the longterm trend due to the occurrence of a major El Niño event that year (the last El Niño so far and one of the strongest on record). These events are examples of the largest natural climate variations on multiyear time scales and, by releasing heat from the ocean, generally cause positive anomalies in global mean temperature. It is remarkable that the year 2005 rivaled the heat of 1998 even though no El Niño event occurred that year. (A bizarre curiosity, perhaps worth mentioning, is that several prominent “climate skeptics” recently used the extreme year 1998 to claim in the media that global warming had ended. In Lindzen’s words, “Indeed, the absence of any record breakers during the past seven years is statistical evidence that temperatures are not increasing.”)33 In addition to the surface measurements, the more recent portion of the global warming trend (since 1979) is also documented by satellite data. It is not 42 stefan rahmstorf straightforward to derive a reliable surface temperature trend from satellites, as they measure radiation coming from throughout the atmosphere (not just near the surface), including the stratosphere, which has strongly cooled,34 and the records are not homogeneous due to the short life span of individual satellites, the problem of orbital decay, observations at different times of day, and drifts in instrument calibration. Current analyses of these satellite data show trends that are fully consistent with surface measurements and model simulations.35 If no reliable temperature measurements existed, could we be sure that the climate is warming? The “canaries in the coal mine” of climate change (as glaciologist Lonnie Thompson puts it) are mountain glaciers. We know, both from old photographs and from the position of the terminal moraines heaped up by the flowing ice, that mountain glaciers have been in retreat all over the world during the past century. There are precious few exceptions, and they are associated with a strong increase in precipitation or local cooling.36 I have inspected examples of shrinking glaciers myself in field trips to Switzerland, Norway, and New Zealand. As glaciers respond sensitively to temperature changes, data on the extent of glaciers have been used to reconstruct a history of Northern Hemisphere temperature over the past four centuries (see figure 3-4).37 Cores drilled in tropical glaciers show signs of recent melting that is unprecedented at least throughout the Holocene—the past 10,000 years.38 Another powerful sign of anthropogenic climate change 43 Source: Reconstructed from proxy data. Mann, Bradley, and Hughes, “Northern Hemisphere Temperatures during the Past Millennium,” as shown in IPCC, Climate Change 2001; Moberg and others, “Highly Variable Northern Hemisphere Temperatures”; and Oerlemans, “Extracting a Climate Signal.” For full references, see notes 37, 39, and 47. Instrumental data are from NASA up to 2005. a. All curves are smoothed over twenty years, and values are given relative to the mean 1951–80. b. Goddard Institute for Space Studies (GISS) data for land and ocean, Northern Hemisphere. Temperature deviation °C Mann et al. 1999 Moberg et al. 2005 Oerlemans 2005 Obs. data (GISS land&ocean NH)b Figure 3-4. Temperature of the Northern Hemisphere during the Past Millenniuma warming, visible clearly from satellites, is the shrinking Arctic sea ice cover (figure 3-5), which has declined 20 percent since satellite observations began in 1979. While climate clearly became warmer in the twentieth century, much discussion particularly in the popular media has focused on the question of how “unusual” this warming is in a longer-term context. While this is an interesting question, it has often been mixed incorrectly with the question of causation. Scientifically, how unusual recent warming is—say, compared to the past millennium—in itself contains little information about its cause. Even a highly unusual warming could have a natural cause (for example, an exceptional increase in solar activity). And even a warming within the bounds of past natural variations could have a predominantly anthropogenic cause. I come to the question of causation shortly, after briefly visiting the evidence for past natural climate variations. Records from the time before systematic temperature measurements were collected are based on “proxy data,” coming from tree rings, ice cores, corals, and other sources. These proxy data are generally linked to local temperatures in some way, but they may be influenced by other parameters as well (for example, in 1979 and in 2005a precipitation), they may have a seasonal bias (for example, the growth season for tree rings), and high-quality long records are difficult to obtain and therefore few in number and geographic coverage. Therefore, there is still substantial uncertainty in the evolution of past global or hemispheric temperatures. (Comparing only local or regional temperature, as in Europe, is of limited value for our purposes, as regional variations can be much larger than global ones and can have many regional causes, unrelated to global-scale forcing and climate change.) The first quantitative reconstruction for the Northern Hemisphere temperature of the past millennium, including an error estimation, was presented by Mann, Bradley, and Hughes and rightly highlighted in the 2001 IPCC report as one of the major new findings since its 1995 report; it is shown in figure 3-6.39 The analysis suggests that, despite the large error bars, twentieth-century warming is indeed highly unusual and probably was unprecedented during the past millennium. This result, presumably because of its symbolic power, has attracted much criticism, to some extent in scientific journals, but even more so in the popular media. The hockey stick–shaped curve became a symbol for the IPCC, and criticizing this particular data analysis became an avenue for some to question the credibility of the IPCC. anthropogenic climate change 45 Source: Data from IPCC, Climate Change 2001. a. The past evolution is shown as in figure 3-5, except that the global (not hemispheric) mean instrumental data are shown, and the temperature origin (0°C anomaly) is placed at the 1990 value of the smoothed instrumental data, since the IPCC projections start in 1990. Two example scenarios (A2, B1) are shown together with the full range (shaded). B1 is a relatively low- and A2 is a relatively high-emissions scenario. The observed temperature rise since 1990 runs along the upper edge of the scenarios. Temperature deviation °C Mann et al. 1999 Moberg et al. 2005 Oerlemans 2005 Obs. data (GISS land&ocean NH)b IPCC Projections Figure 3-6. Global Temperature Projections for the Twenty-First Centurya Three important things have been overlooked in much of the media coverage. First, even if the scientific critics had been right, this would not have called into question the very cautious conclusion drawn by the IPCC from the reconstruction by Mann, Bradley, and Hughes: “New analyses of proxy data for the Northern Hemisphere indicate that the increase in temperature in the twentieth century is likely to have been the largest of any century during the past 1,000 years.” This conclusion has since been supported further by every single one of close to a dozen new reconstructions (two of which are shown in figure 3-6). Second, by far the most serious scientific criticism raised against Mann, Hughes, and Bradley was simply based on a mistake.40 The prominent paper of von Storch and others, which claimed (based on a model test) that the method of Mann, Bradley, and Hughes systematically underestimated variability, “was [itself] based on incorrect implementation of the reconstruction procedure.”41 With correct implementation, climate field reconstruction procedures such as the one used by Mann, Bradley, and Hughes have been shown to perform well in similar model tests.42 Third, whether their reconstruction is accurate or not has no bearing on policy. If their analysis underestimated past natural climate variability, this would certainly not argue for a smaller climate sensitivity and thus a lesser concern about the consequences of our emissions. Some have argued that, in contrast, it would point to a larger climate sensitivity.43 While this is a valid point in principle, it does not apply in practice to the climate sensitivity estimates discussed herein or to the range given by IPCC, since these did not use the reconstruction of Mann, Hughes, and Bradley or any other proxy records of the past millennium. Media claims that “a pillar of the Kyoto Protocol” had been called into question were therefore misinformed. As an aside, the protocol was agreed in 1997, before the reconstruction in question even existed. The overheated public debate on this topic has, at least, helped to attract more researchers and funding to this area of paleoclimatology; its methodology has advanced significantly, and a number of new reconstructions have been presented in recent years. While the science has moved forward, the first seminal reconstruction by Mann, Hughes, and Bradley has held up remarkably well, with its main features reproduced by more recent work. Further progress probably will require substantial amounts of new proxy data, rather than further refinement of the statistical techniques pioneered by Mann, Hughes, and Bradley. Developing these data sets will require time and substantial effort. It is time to address the final statement: most of the observed warming over the past fifty years is anthropogenic. A large number of studies exist that have taken different approaches to analyze this issue, which is generally called the “attribution problem.” I do not discuss the exact share of the anthropogenic contribution (although this is an interesting question). By “most” I simply mean “more than 50 percent.” 46 stefan rahmstorf The first and crucial piece of evidence is, of course, that the magnitude of the warming is what is expected from the anthropogenic perturbation of the radiation balance, so anthropogenic forcing is able to explain all of the temperature rise. As discussed here, the rise in greenhouse gases alone corresponds to 2.6 W/m2 of forcing. This by itself, after subtraction of the observed 0.6 W/m2 of ocean heat uptake, would cause 1.6°C of warming since preindustrial times for medium climate sensitivity (3°C). With a current “best guess” aerosol forcing of 1 W/m2, the expected warming is 0.8°C. The point here is not that it is possible to obtain the exact observed number—this is fortuitous because the amount of aerosol forcing is still very uncertain—but that the expected magnitude is roughly right. There can be little doubt that the anthropogenic forcing is large enough to explain most of the warming. Depending on aerosol forcing and climate sensitivity, it could explain a large fraction of the warming, or all of it, or even more warming than has been observed (leaving room for natural processes to counteract some of the warming). The second important piece of evidence is clear: there is no viable alternative explanation. In the scientific literature, no serious alternative hypothesis has been proposed to explain the observed global warming. Other possible causes, such as solar activity, volcanic activity, cosmic rays, or orbital cycles, are well observed, but they do not show trends capable of explaining the observed warming. Since 1978, solar irradiance has been measured directly from satellites and shows the well-known eleven-year solar cycle, but no trend.44 There are various estimates of solar variability before this time, based on sunspot numbers, solar cycle length, the geomagnetic AA index, neutron monitor data, and carbon-14 data. These indicate that solar activity probably increased somewhat up to 1940. While there is disagreement about the

variation in previous centuries, different authors agree that solar activity did not significantly increase during the last sixty-five years.45 Therefore, this cannot explain the warming, and neither can any of the other factors mentioned. Models driven by natural factors only, leaving the anthropogenic forcing aside, show a cooling in the second half of the twentieth century (for an example, see figure 2-2, panel a, in chapter 2 of this volume). The trend in the sum of natural forcings is downward.46 The only way out would be either some as yet undiscovered unknown forcing or a warming trend that arises by chance from an unforced internal variability in the climate system. The latter cannot be completely ruled out, but has to be considered highly unlikely. No evidence in the observed record, proxy data, or current models suggests that such internal variability could cause a sustained trend of global warming of the observed magnitude. As discussed, twentiethcentury warming is unprecedented over the past 1,000 years (or even 2,000 years, as the few longer reconstructions available now suggest), which does not support the idea of large internal fluctuations.47 Also, those past variations correlate well with past forcing (solar variability, volcanic activity) and thus appear to anthropogenic climate change 47 be largely forced rather than due to unforced internal variability.48 And indeed, it would be difficult for a large and sustained unforced variability to satisfy the fundamental physical law of energy conservation. Natural internal variability generally shifts heat around different parts of the climate system—for example, the large El Niño event of 1998, which warmed the atmosphere by releasing heat stored in the ocean. This mechanism implies that the ocean heat content drops as the atmosphere warms. For past decades, as discussed, we observed the atmosphere warming and the ocean heat content increasing, which rules out heat release from the ocean as a cause of surface warming. The heat content of the whole climate system is increasing, and there is no plausible source of this heat other than the heat trapped by greenhouse gases. A completely different approach to attribution is to analyze the spatial patterns of climate change. This is done in so-called fingerprint studies, which associate particular patterns or “fingerprints” with different forcings. It is plausible that the pattern of a solar-forced climate change differs from the pattern of a change caused by greenhouse gases. For example, a characteristic of greenhouse gases is that heat is trapped closer to the Earth’s surface and that, unlike solar variability, greenhouse gases tend to warm more in winter and at night. Such studies have used different data sets and have been performed by different groups of researchers with different statistical methods. They consistently conclude that the observed spatial pattern of warming can only be explained by greenhouse gases.49 Overall, it has to be considered highly likely that the observed warming is indeed predominantly due to the human-caused increase in greenhouse gases. Discussion and Consequences This paper discussed the evidence for the anthropogenic increase in atmospheric CO2concentration and the effect of CO2on climate, finding that this anthropogenic increase is proven beyond reasonable doubt and that a mass of evidence points to a CO2effect on climate of 3°C ± 1.5°C global warming for a doubling of concentration. (This is the classic IPCC range; my personal assessment is that, in the light of new studies since the IPCC Third Assessment Report, the uncertainty range can now be narrowed somewhat to 3°C ± 1°C.) This is based on consistent results from theory, models, and data analysis, and, even in the absence of any computer models, the same result would still hold based on physics and on data from climate history alone. Considering the plethora of consistent evidence, the chance that these conclusions are wrong has to be considered minute. If the preceding is accepted, then it follows logically and incontrovertibly that a further increase in CO2concentration will lead to further warming. The magnitude of our emissions depends on human behavior, but the climatic 48 stefan rahmstorf response to various emissions scenarios can be computed from the information presented here. The result is the famous range of future global temperature scenarios shown in figure 3-6.50 Two additional steps are involved in these computations: the consideration of anthropogenic forcings other than CO2(for example, other greenhouse gases and aerosols) and the computation of concentrations from the emissions. Other gases are not discussed here, although they are important to get quantitatively accurate results. CO2 is the largest and most important forcing. Concerning concentrations, the scenarios shown basically assume that ocean and biosphere take up a similar share of our emitted CO2as in the past. This could turn out to be an optimistic assumption; some models indicate the possibility of a positive feedback, with the biosphere turning into a carbon source rather than a sink under growing climatic stress.51 It is clear that even in the more optimistic of the shown (non-mitigation) scenarios, global temperature would rise by 2–3°C above its preindustrial level by the end of this century. Even for a paleoclimatologist like myself, this is an extraordinarily high temperature, which is very likely unprecedented in at least the past 100,000 years. As far as the data show, we would have to go back about 3 million years, to the Pliocene, for comparable temperatures. The rate of this warming (which is important for the ability of ecosystems to cope) is also highly unusual and unprecedented probably for an even longer time. The last major global warming trend occurred when the last great Ice Age ended between 15,000 and 10,000 years ago: this was a warming of about 5°C over 5,000 years, that is, a rate of only 0.1°C per century.52 The expected magnitude and rate of planetary warming is highly likely to come with major risks and impacts in terms of sea level rise (Pliocene sea level was 25–35 meters higher than now due to smaller Greenland and Antarctic ice sheets), extreme events (for example, hurricane activity is expected to increase in a warmer climate), and ecosystem loss.53 The second part of this paper examined the evidence for the current warming of the planet and discussed what is known about its causes. This part showed that global warming is already a measured and well-established fact, not a theory. Many different lines of evidence consistently show that most of the observed warming of the past fifty years was caused by human activity. Above all, this warming is exactly what would be expected given the anthropogenic rise in greenhouse gases, and no viable alternative explanation for this warming has been proposed in the scientific literature. Taken together, the very strong evidence, accumulated from thousands of independent studies, has over the past decades convinced virtually every climatologist around the world (many of whom were initially quite skeptical, including myself) that anthropogenic global warming is a reality with which we need to deal.

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U.S. leadership on climate change gets other countries on board

Paul Harris, Professor of Political Science @ Lingnan University, 2009 Energy Policy, Vol. 37, Iss. 3, March)

For those interested in climate change and the global environment more generally, understanding the role of the United States is central. Its emissions of GHGs surpass those of any other country except China. On a per capita basis, US emissions of GHGs are among the highest in the world. With less than one-twentieth of the world's population, the United States produces nearly one-fourth of the world's GHGs. What is more, as the world's largest economy, the United States has considerable financial resources that can be directed at environmental problems abroad, and its technological capability has tremendous potential to help mitigate GHG pollution. If the United States were to lead on addressing climate change, it could set an example that other countries would likely follow. If it continues to reject such a leadership role, many other states will not reduce their own GHG emissions. This could leave Europe more-or-less alone in taking major action on climate change, and at worst it might induce Europe to backtrack in this respect. In other words, a lack of US climate leadership could undermine Europe's climate leadership. While the practical and political importance of US action is crucial, the United States also has an ethical obligation—as the world's largest polluter and as the world's wealthiest country—to address climate change and its consequences. A change in US policy is not only essential for effective international climate policy; it is also the morally right thing for the United States and its people to do.

Warming causes extinction

Deibel 07 (, Professor of IR @ National War College, 2007 (Terry L., “Foreign Affairs Strategy: Logic for American Statecraft” pages 397-8)

Finally, there is one major existential threat to American security (as well as prosperity) of a nonviolent nature, which, though far in the future, demands urgent action. It is the threat of global warming to the stability of the climate upon which all earthly life depends. Scientists worldwide have been observing the gathering of this threat for three decades now, and what was once a mere possibility has passed through probability to near certainty. Indeed not one of more than 900 articles on climate change published in refereed scientific journals from 1993 to 2003 doubted that anthropogenic warming is occurring. “In legitimate scientific circles,” writes Elizabeth Kolbert, “it is virtually impossible to find evidence of disagreement over the fundamentals of global warming.” Evidence from a vast international scientific monitoring effort accumulates almost weekly, as this sample of newspaper reports shows: an international panel predicts “brutal droughts, floods and violent storms across the planet over the next century”; climate change could “literally alter ocean currents, wipe away huge portions of Alpine Snowcaps and aid the spread of cholera and malaria”; “glaciers in the Antarctic and in Greenland are melting much faster than expected, and…worldwide, plants are blooming several days earlier than a decade ago”; “rising sea temperatures have been accompanied by a significant global increase in the most destructive hurricanes”; “NASA scientists have concluded from direct temperature measurements that 2005 was the hottest year on record, with 1998 a close second”; “Earth’s warming climate is estimated to contribute to more than 150,000 deaths and 5 million illnesses each year” as disease spreads; “widespread bleaching from Texas to Trinidad…killed broad swaths of corals” due to a 2-degree rise in sea temperatures. “The world is slowly disintegrating,” concluded Inuit hunter Noah Metuq, who lives 30 miles from the Arctic Circle. “They call it climate change…but we just call it breaking up.” From the founding of the first cities some 6,000 years ago until the beginning of the industrial revolution, carbon dioxide levels in the atmosphere remained relatively constant at about 280 parts per million (ppm). At present they are accelerating toward 400 ppm, and by 2050 they will reach 500 ppm, about double pre-industrial levels. Unfortunately, atmospheric CO2 lasts about a century, so there is no way immediately to reduce levels, only to slow their increase, we are thus in for significant global warming; the only debate is how much and how serious the effects will be. As the newspaper stories quoted above show, we are already experiencing the effects of 1-2 degree warming in more violent storms, spread of disease, mass die offs of plants and animals, species extinction, and threatened inundation of low-lying countries like the Pacific nation of Kiribati and the Netherlands at a warming of 5 degrees or less the Greenland and West Antarctic ice sheets could disintegrate, leading to a sea level of rise of 20 feet that would cover North Carolina’s outer banks, swamp the southern third of Florida, and inundate Manhattan up to the middle of Greenwich Village. Another catastrophic effect would be the collapse of the Atlantic thermohaline circulation that keeps the winter weather in Europe far warmer than its latitude would otherwise allow. Economist William Cline once estimated the damage to the United States alone from moderate levels of warming at 1-6 percent of GDP annually; severe warming could cost 13-26 percent of GDP. But the most frightening scenario is runaway greenhouse warming, based on positive feedback from the buildup of water vapor in the atmosphere that is both caused by and causes hotter surface temperatures. Past ice age transitions, associated with only 5-10 degree changes in average global temperatures, took place in just decades, even though no one was then pouring ever-increasing amounts of carbon into the atmosphere. Faced with this specter, the best one can conclude is that “humankind’s continuing enhancement of the natural greenhouse effect is akin to playing Russian roulette with the earth’s climate and humanity’s life support system. At worst, says physics professor Marty Hoffert of New York University, “we’re just going to burn everything up; we’re going to heat the atmosphere to the temperature it was in the Cretaceous when there were crocodiles at the poles, and then everything will collapse.” During the Cold War, astronomer Carl Sagan popularized a theory of nuclear winter to describe how a thermonuclear war between the Untied States and the Soviet Union would not only destroy both countries but possibly end life on this planet. Global warming is the post-Cold War era’s equivalent of nuclear winter at least as serious and considerably better supported scientifically. Over the long run it puts dangers from terrorism and traditional military challenges to shame. It is a threat not only to the security and prosperity to the United States, but potentially to the continued existence of life on this planet.

Extensions:

Contrails

Airplanes release harmful emissions

Vedantham and Oppenheimer 94, Anu Vedantham, University of Pennsylvania, Michael Oppenheimer, Environmental Defense Fund, 01-01-94, “Aircraft Emissions and the Global Atmosphere,” http://repository.upenn.edu/cgi/viewcontent.cgi?article=1061&context=library\_papers&sei-redir=1&referer=http%3A%2F%2Fscholar.google.com%2Fscholar%3Fq%3Dairplanes%2Bemit%2Bcontrails%26btnG%3D%26hl%3Den%26as\_sdt%3D0%252C30#search=%22airplanes%20emit%20contrails%22

Commercial aircraft log most of their cruise miles, and contribute most of their emissions, at altitudes well above the boundary layer in the upper troposphere. The high proportion of fuel burn above 9 kms is illustrated i in Figure 2 for scheduled passenger and cargo flights during 1990. NOx emissions here may undergo reactions with other atmospheric gases that are stimulated by sunlight to form ozone. With the exception of unreactive compounds like carbon dioxide,emitted gases and their by-products are removed from the troposphere within about 10 days by washing out in precipitation, or being removed by dry deposition, chemical reaction, or photolysis. 7Figure 2: Fuel Burn vs. Altitude -E - 20 I I I I I - - o 1 I I 2 I 3 FUEL BURN (lOlOkg/yr/km) Reference: Stolarski and Wesosky (19930). p124. Figure 3-2.9 (a). The consequences of these emissions are a matter of lively interest in the scientific community at the current time. In the upper troposphere, ozone acts as a potent greenhouse gas, so any additional source is of concern. Observations have been too limited to provide a global picture of ozone in the upper troposphere. However, the limited measurements and model results available suggest that concentrations may have doubled over much of the northern hemisphere since pre-industrial times. The apparent buildup of ozone in the upper troposphere may have added a significant increment to the anthropogenic greenhouse effect of carbon dioxide and other gases. 8 8The contribution of aviation to this change is very uncertain, but aircraft produce the only human-made emissions occurring directly at those altitudes. Other sources of nitrogen oxides exist at Earth's surface. Although only about 2% of global anthropogenic NOx emissions are due to aviation, nitrogen oxides emitted at cruise altitudes are much more efficient, on a per..molecule basis, as generators of ozone than nitrogen oxides emitted near the ground. 9 . Furthermore, the emission of nitrogen oxides from aviation at northern midlatitudes in the upper troposphere appears to be of similar magnitude to the nitrogen oxides arriving there from all other sources, including natural ones. 3 But it is unknown how much of the excess ozone in the upper troposphere is produced locally as opposed to how much is produced elsewhere from ground-based sources and transported there. Models, which are as yet crude, ascribe a 4-15% ozone increase in the upper troposphere to current emissions from aviation. 3 Other emissions from aircraft may affect climate. For instance, under some conditons, water vapor from subsonic jets can form visible contrails that reflect sunlight. The ice cystals that compose the contrails may enhance the formation of thin cirrus clouds that trap heat and act in the same manner as greenhouse gases.

HSR will replace commercial aviation by 2030

Pelletier 10, Dick Pelletier, writer for Positive Futurist, 11-27-10, “Tomorrow’s maglev trains will replace air travel, experts say,” http://positivefuturist.com/archive/335.html

If you've been to an airport lately, you've probably noticed that air travel is becoming more and more congested. Despite delays though, airplanes still provide the fastest way to travel hundreds or thousands of miles. But newly-developing "maglev" technology, which allows trains to magnetically hover above tracks avoiding friction, will in the future, experts predict, achieve speeds up to 4,000 mph; which promises to radically change human transportation. China has become the leader in this futuristic technology with 4,000 miles of high-speed rails. In the past, China helped the U.S. build railroads when laborers laid the Transcontinental Railroad tracks in mid-1800s. And now California Governor Schwarzenegger has signed initial agreements with China to help build a Los Angeles-to-San Francisco maglev train. Although today's maglev trains achieve top speeds of only 310 mph (500 kph), futurists believe the technology will advance exponentially in the decades ahead. By mid-2030s, experts predict a New York-to-Los Angeles maglev trip will take 3 hours, as opposed to the current 3 days. MIT engineer Frank Davidson believes that by mid-century, this technology will achieve even faster speeds and could replace air travel altogether. Davidson, whose past accomplishment includes overseeing construction of the England-France Channel tunnel, dreams of one day building a "tube" under the Atlantic Ocean; allowing 90-minute New York to London travel. This futuristic idea would use magnets not only to levitate the train, but also to propel it with a series of magnetic pulses from the side of the track. Each push needn't be very large since it's the accumulation of pushes over many miles that achieve high velocities, Davidson claims. But there's a question of how much acceleration or deceleration people can comfortably bear. A reasonable amount might be a tenth of a "g"; a force equal to one tenth of one's body weight. The Atlantic tube train could accelerate constantly for the first six minutes, cruise at full speed for an hour and ten minutes, and then decelerate for the final 14 minutes. Each train could carry 1,000 passengers, the equivalent of two jumbo jets. But energy costs will be far less than for air travel; plus, maglev trains are pollution-free. Despite worldwide interest in maglev, costs have been a major barrier. Estimates in the U.S. range from $10 million to $30 million per mile. However, expected development of room-temperature superconducting magnets will lower costs, and if you consider another futuristic technology, molecular nanotechnology, which experts predict will be available by the 2030s, labor and material expenses will be drastically reduced making maglev construction affordable anywhere. Positive futurists envision a time when every community will be connected with maglev trains. But will this futuristic travel system be safe? Dedicated tubes for each direction will prevent head-on crashes and in the absence of wheels and rails, derailment would be impossible. Maglev could definitely become our preferred method of transportation as we trek through the century. Will maglev trains replace our dependence on air travel? President Obama recently called for "America to move to a system of high-speed rail travel which would ease congestion and air pollution as well as save energy." Yes, this "magical future" could become reality.

Economy

Economic decline is imminent---qualified researchers predict the next depression by 2030

Johnson 12 4/5, \*Victor Johnson is a writer for The Inquisitr, “Global Economic Collapse Imminent: MIT Researchers Predict Next Great Depression By 2030,” http://www.inquisitr.com/215867/global-economic-collapse-imminent-mit-researchers-predict-next-great-depression-2030/,

According to a study released by researchers at Jay W. Forrester’sinstitute at MIT, the world is headed for a “global economic collapse” if humans around the planet do not waver in their consumption of natural resource. Not only is global economic collapse imminent at the current rate of resource consumption and population growth, “precipitous population decline” will also occur. “The world is on track for disaster.” According to the report which was produced forThe Club of Rome, the researchers conjured a computing model in orderto forecast various scenarios based upon the current models of globalresource consumption and population growth. A computing model is amathematical model of a complex process or system which requiresconditions for testing. The majority of the computer scenarios processed indicated imminent economic collapse would occur right around the year 2030. Unlimited economic growth potential is still a possibility, however, governments around the world would have to enact policies to limit the expansion of our ecological footprint (human demand on the Earth’s ecosystems) in addition to investing in green technologies. Twelve million copies of the recently published reportwere distributed in thirty-seven different languages around the world.While there are those, such as former governor of the Federal ResearchBoard and Yale economist Henry Wallich, who strongly disagree with thefindings detailed in both the Limits to Growth as well as the morerecent MIT study conveying similar findings. Wallich believed that theregulation of economic growth would be equivalent to “consigningbillions to permanent poverty.”

HSR creates jobs

Todorovich, Schned, and Lane, 2011Todorovich, Schned, and Lane, Petra, Daniel, and Robert . director, and associate planner, of America 2050- a national urban planning initiative to develop an infrastructure and growth strategy for the U.S., September 2011, Policy Focus Report- Lincoln Institute of Land Policy, “High-Speed Rail: International Lessons for U.S. Policy Makers”, http://www.lincolninst.edu/pubs/dl/1948\_1268\_High-Speed Rail PFR\_Webster.pdf

High-speed rail creates thousands of construction-related jobs in design, engineering, planning, and construction, as well as jobs in ongoing maintenance and operations. In Spain, the expansion of the high-speed AVE system from Malaga to Seville is predicted to create 30,000 construction jobs (Euro Weekly 2010). In China, over 100,000 construction workers were involved in building the high-speed rail line that connects Beijing and Shanghai (Bradsher 2010). Sustained investment could foster the development of new manufacturing industries for rail cars and other equipment, and generate large amounts of related employment.

Expanded tourism and visitor spending

Todorovich, Schned, and Lane, 2011Todorovich, Schned, and Lane, Petra, Daniel, and Robert . director, and associate planner, of America 2050- a national urban planning initiative to develop an infrastructure and growth strategy for the U.S., September 2011, Policy Focus Report- Lincoln Institute of Land Policy, “High-Speed Rail: International Lessons for U.S. Policy Makers”, http://www.lincolninst.edu/pubs/dl/1948\_1268\_High-Speed Rail PFR\_Webster.pdf

Just as airports bring visitors and their spending power into the local economy, high-speed rail stations attract new tourists and business travelers who might not have made the trip otherwise. A study by the U.S. Conference of Mayors (2010) concluded that building high-speed rail would increase visitor spending annually by roughly $225 million in the Orlando region, $360 million in metropolitan Los Angeles, $50 million in the Chicago area, and $100 million in Greater Albany, New York.

HSR has many economic benefits

Todorovich, Schned, and Lane, Todorovich, Schned, and Lane, Petra, Daniel, and Robert . director, and associate planner, of America 2050- a national urban planning initiative to develop an infrastructure and growth strategy for the U.S., September 2011, Policy Focus Report- Lincoln Institute of Land Policy, “High-Speed Rail: International Lessons for U.S. Policy Makers”, http://www.lincolninst.edu/pubs/dl/1948\_1268\_High-Speed Rail PFR\_Webster.pdf

High-speed rail’s ability to promote economic growth is grounded in its capacity to increase access to markets and exert positive effects on the spatial distribution of economic activity (Redding and Sturm 2008). Transportation networks increase market access, and economic development is more likely to occur in places with more and better transportation infrastructure. In theory, by improving access to urban markets, highspeed rail increases employment, wages, and productivity; encourages agglomeration; and boosts regional and local economies. Empirical evidence of high-speed rail’s impact around the world tends to support the following theoretical arguments for high-speed rail’s economic beneﬁts.

Oil

Maglev Reduces foreign dependence on Oil

NAMTI 12(North American Maglev Transport Institute, created by scientists, engineers and technologists to increase the exposure and level of understanding for magnetically levitated (maglev) transport*.* “Maglev’s Societal Impact.” 2012. http://namti.org/?page\_id=9. 19 May 2012. bij).

Maglevs are not just exotic transportation technologies designed for high speeds; they are actually vehicles for societal change. For instance, the deployment of an extensive high-speed maglev network for electric-powered intercity transportation would significantly lower America’s dependence on an increasingly unstable world oil supply. Use of lower-speed maglevs for commuter applications or for inner city transit would also further lower oil dependence by coaxing people out of their cars for those longer point-to-point trips. These lower-speed systems also have the advantage of being nearly silent and vibration-free, while able to operate safely on the steepest of grades, even during inclement weather. Most important, these systems are designed to be safer than any other transportation mode ever invented, since derailments are virtually impossible due to the way the vehicles fit around or within their guideways. In addition, braking requires no friction and is therefore unaffected by surface conditions (ice, snow, rain).

High Speed Rail creates jobs, reduces congestion, and decreases oil consumption

Melaniphy 7/18/12, Michael Melaniphy, President and CEO, American Public Transportation Association, “High-Speed Rail Solves Tough Questions,” http://transportation.nationaljournal.com/2012/07/highspeed-rail-in-california.php?rss=1

High-speed rail provides the answer to many of the challenges we face today in America. It creates jobs, expands mobility, reduces congestion and decreases our dependence on foreign oil. Today, traffic congestion costs $140 billion in lost time and productivity. On the other hand, every $1 we invest in high-speed rail creates $4 in economic benefits, in addition to providing transportation relief to a tight area. The funding bill signed by Gov. Brown today is expected to create 600,000 full-time construction jobs over the course of building the project and 450,000 permanent new jobs from economic growth over the next 25 years.

By creating a high-speed rail option, we will keep billions of dollars in the US economy through decreased oil consumption and provide an energy efficient solution for generations to come. Implementation of high-speed rail will make the entire transportation system – air, road and rail – work better as an interconnected system. This program will connect major cities that currently do not have significant air service. It will connect suburban commuting patterns with central cities, and will connect the largest central cities while reducing airport congestion. These aren’t just benefits for San Francisco or Los Angeles—they are solutions that benefit the entire state.

High-Speed rail quickly decreases dependence on oil

Perl 11, Dr. Anthony Perl is Professor of Urban Studies and Political Science at Simon Fraser University, November 19, 2011. http://www.cnn.com/2011/11/18/world/how-green-is-hsr/index.html

Any debate about the future of high-speed rail must consider where this mobility option fits into the 'big picture' of how transportation systems meet looming economic, energy and environmental challenges. In a world where 95% of motorized mobility is currently fueled by oil, high-speed rail offers a proven means of reducing dependence on this increasingly problematic energy source. This value of using proven electric propulsion technology should not be underestimated when both the time and money to deploy energy alternatives are in short supply. In our recent book Transport Revolutions, Richard Gilbert and I documented the economic, environmental and political dividends to be gained from replacing the internal combustion engines powering today's aircraft, cars, and motor vehicles with traction motors that can be powered by multiple energy sources delivered through the electric grid. Since electricity is an energy carrier, it can be generated from a mix of sources that incorporate the growing share of geothermal, hydro, solar, and wind energy that will be produced in the years ahead. And because electric motors are three to four times more efficient than internal combustion engines, an immediate improvement will precede introducing renewable energy into transportation. Grid-connected traction offers the only realistic option for significantly reducing oil use in transportation over the next 10 years. If such a shift does not begin during this decade, the risk of a global economic collapse and/or geo-political conflict over the world's remaining oil reserves would become dangerously elevated. Making a significant dent in transportation's oil addiction within 10 years is sooner than fuel cells, biofuels, battery-electric vehicles and other alternative energy technologies will be ready to deliver change. Biofuels that could power aircraft now cost hundreds of dollars per gallon to produce. Batteries that a big enough charge to power vehicles between cities are still too big and expensive to make electric cars and buses affordable. But grid-connected electric trains have been operating at scale and across continents for over a century. And when the Japanese introduced modern high-speed trains through their Shinkansen, in 1964, the utility of electric trains was greatly extended. Since the 1980s, countries across Asia and Europe have been building new high-speed rail infrastructure to deploy electric mobility between major cities up to 1,000 kilometers apart. For intercity trips between 200 and 1,000 kilometers, high-speed trains have proven their success in drawing passengers out of both cars and planes, as well as meeting new travel demand with a much lower carbon footprint than driving or flying could have done. If we are serious about reducing oil's considerable risks to global prosperity and sustainability, we will not miss the opportunity offered by high-speed rail to decrease transportation's oil consumption sooner, rather than later.

Oil Dependence undermines US democracy and anti-terror efforts and undermines hegemony

Czarnik 07, Lieutenant Colonel Joseph E. Czarnik, 03-22-07, “US Oil Dependency--The New Weapon of Mass Disruption,” http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA469668

President George W. Bush, during his 2006 State of the Union address, stated “America is addicted to oil, which is often imported from unstable parts of the world.” He went on to say that it was time for the United States to “move beyond a petroleum-based economy and make our dependence on Middle Eastern oil a thing of the past.” Americans realize that our economy is petroleum-based, in so much of everything that is created, built, or transported consumes energy. What Americans may not understand is why importing oil from unstable parts of the world is bad. This addiction has placed the United States in the precarious position whereby it (a) often combats and funds terrorism simultaneously and (b) attempts to spread democracy, but instead enables authoritarian leaders to flourish.

One could easily argue that the United States’ current addiction to imported fossil fuel has become its greatest economic and political challenge. Others go even further and contend that in addition to United States domestic policy, U.S. foreign policy is negatively affected by rising oil prices in that the extra proceeds from oil can cause nations to move away from democracy. Oil supply can be used against the United States as a strategic weapon. The US Government defines Weapons of Mass Destruction (WMD) as Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE). However, oil flow disruption could have greater economic consequences to the United States than most CBRNE events. Oil-rich nations have long had the ability to disrupt the free flow of oil and they have not been afraid to use disruption as a weapon against the United States. The United States should prepare for attacks that come in the form of weapons of mass disruption with oil being a most likely candidate. America’s military is arguably the strongest in the world, yet an adversary could deliver this great power a devastating blow without ever engaging the military.

Solvency

Maglevs have numerous societal benefits

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Maglevs are not just exotic transportation technologies designed for high speeds; they are actually vehicles for societal change. For instance, the deployment of an extensive high-speed maglev network for electric-powered intercity transportation would significantly lower America’s dependence on an increasingly unstable world oil supply. Use of lower-speed maglevs for commuter applications or for inner city transit would also further lower oil dependence by coaxing people out of their cars for those longer point-to-point trips. These lower-speed systems also have the advantage of being nearly silent and vibration-free, while able to operate safely on the steepest of grades, even during inclement weather. Most important, these systems are designed to be safer than any other transportation mode ever invented, since derailments are virtually impossible due to the way the vehicles fit around or within their guideways. In addition, braking requires no friction and is therefore unaffected by surface conditions (ice, snow, rain). In a November 2005 speech, Secretary of Transportation, Norman Y. Mineta, stated that America’s cities were too far apart to justify a national rail system, such as in Europe or Japan. Maglev makes this an outdated statement. Although this conventional wisdom may apply to conventional railroads, America’s cities are not too spread out for a national high-speed maglev system that would be competitive with air travel. A high-speed maglev’s top cruising speed is in excess of 500 kph (310 mph), and combined with very quick acceleration and deceleration, makes it a perfect technology for travel distances between 50 to 1,000 kilometers (30 to 600 miles), especially, when trip times, reliable operations, overall environmental impact, energy consumption and safety are combined for consideration (see chart below). In addition, a 500-mile maglev line could make a few stops along its route to service those smaller communities that the airlines simply fly over. A one- or two-minute stop is all that would be required at each station. Several trains a day would reconnect these smaller communities to larger cities and dramatically discourage long, boring, slow, and energy wasteful highway trips by car. What Mr. Mineta failed to mention was that many American cities are too close together to financially justify inefficient short-haul air travel, yet the federal government continues to subsidize (i.e., encourage) these operations that only add to the congestion of major airports while simultaneously imposing a disproportionately high cost in airport delays (see chart below)

Speed has no effect on the body

NASA 2000 (National Aeronautics and Space Administration, http://quest.nasa.gov/saturn/qa/new/Effects\_of\_speed\_and\_acceleration\_on\_the\_body.txt; BIJ)

The human body can endure any speed in space, or on Earth, but the time taken to reach that speed is governed, among other things, by the body's ability to withstand the forces of acceleration. Every moment of our lives is subject to an acceleration of one sort or another. In a car, we feel the bumps and irregularities in the road by the small vertical accelerations they impose on the car, and when the car turns a corner, we tend to lean over, because our bodies are trying to continue in a straight line, while the car's turning imposes a sideways acceleration on us. When the car brakes, we lean forward, because the car is decelerating. Talking about "acceleration" and "deceleration" at the same time might sound confusing, but they are describing the same thing - a change in velocity; either faster or slower. Even when we are sitting in a chair, we are still subject to the constant acceleration of the Earth's gravity. It is trying to pull us down at 32 feet per second squared, but whatever we are sitting on, or standing on, stops us, so we stick to that surface. Take away that surface and gravitational acceleration takes over, until we encounter another surface, at which point, deceleration takes place.

\*\*\*2AC\*\*\*

A2: Spending

1. No specific link – we have been deficit spending for years and there have never been implications like the Internal Link Chain
2. Deficits save the economy – The push consumption through pump priming

Galbraith 8 [James K. Professor of Economics, University of Texas, National Journal,” Is the deficit a threat to future recovery” http://economy.nationaljournal.com/2008/12/is-the-deficit-a-threat-to-a-f.php#1184661]

No. The question is grossly misconceived. Right now and for the immediate future, the budget deficit is the only source of demand that can fuel a recovery. Our present problem is not that it is too big, but that it is too small. Far too small. In principle, economic growth can come from household consumption, business investment, government spending, or exports. This is a tautology, indisputable and known to everyone who has ever opened a textbook. Household consumption depends on incomes and on credit. The collapse of credit, rooted in the decline of housing values, is at the root of the crisis. In parts of California home values have fallen 50 percent already, which would place them far below the debt owed on the homes in most cases. Quite apart from the fact that the banking sector is in deep trouble, borrowing power has collapsed. For this reason, rescuing the banks, though necessary, has not and will not produce recovery. Business investment depends on the expectation of profit. But with consumption falling, there can be no expectation of profitability for the time being. So business investment will follow consumption down. Thanks to a low dollar, exports were the one bright spot in the growth picture for most of 2008. But the flight to quality that rescued the dollar will clobber the competitiveness of American exports. For these reasons, the entire private sector, across the entire country and indeed the world, is pulling the economy downward at the present time. This is an unprecedented event in my professional lifetime. Previous deep recessions, for example in 1974 and 1981, were caused by external shocks or policy shocks. This one is driven by an internal collapse of the credit system, the first in almost eighty years. In normal times, after a passage of time, as cars and appliances age and people are born, married, move around and die, pent-up demand grows in the household sector. Once that has happened, a sharp fall in interest rates is normally sufficient to kick-start the resumption of sales of durable goods, home construction and then a general credit expansion. There should be no expectation of this for the foreseeable future, because of the condition of the banks and the vast excess inventory of housing. These are not normal times and the normal mechanics of a credit recovery cannot be counted on. Meanwhile, as consumption, investment and exports decline, so will tax revenues. The government budget deficit is destined to rise, by a lot, on this account alone. This is helpful: a falling tax burden in a progressive tax structure keeps money in private pockets. But it is a weak device to promote expansion, since tax savings will be used first to try to pay down debt, a slow process. A major tax cut, focused on working Americans such as by remitting the payroll tax, would help sustain after-tax incomes and provide funds to pay mortgages and buy cars. But even these effects are uncertain in a debt deflation.

1. Plan solves – oil dependence is the biggest drain on the economy in the status quo. HSR will lower our dependence on oil, which will massively boost the economy.
2. Transportation Infrastructure spending is key to boost the economy.

PBS 08 (PBS, Public Broadcasting Service, 12/22/08, PBS, Infrastructure Spending May be Key to Boosting Economy, http://www.pbs.org/newshour/bb/business/july-dec08/infrastructure\_12-22.html)

GWEN IFILL: Now part two of the jobs story. What will that money spent on new infrastructure projects buy? And will the government get enough bang for its buck? Our economics correspondent, Paul Solman, has been looking into those questions. PAUL SOLMAN: The pockmarked roads of New Jersey, one small argument for why America desperately needs a massive infrastructure makeover. ROBERT FRANK, economist: One-hundred-and-twenty-dollars-a-year damage per year per vehicle. The potholes in the roads do more damage to vehicles each year than it would cost to fix them. That's just ridiculous that we don't fix them. PAUL SOLMAN: But the main reason economist Bob Frank think we should splurge on infrastructure is that government spending is the road to economic recovery and the only way out of the hole we're all in. ROBERT FRANK: We're looking at an unprecedented collapse in consumer spending. The firms aren't spending. There's nobody who wants to buy the stuff they're selling. So, what that means is that there is a huge demand shortfall that we're looking at, maybe half-a-trillion dollars, maybe even more than that. If the government doesn't spend massively more in the next year, we're in for a terrible, terrible downturn. PRESIDENT ELECT BARACK OBAMA: Good morning. PAUL SOLMAN: Our incoming president would seem to agree. BARACK OBAMA: But we need action, and action now. That's why I have asked my economic team to develop an economic recovery plan for both Wall Street and Main Street that will help save or create at least 2.5 million jobs. PAUL SOLMAN: By splurging on, among other things, infrastructure. It last happened in the 1930s, when, among the bridges, dams, tunnels and the like, this terminal at New York's La Guardia Airport was built and adorned. ROBERT FRANK: Spending projects had clearly positive effects on employment. Many people were employed who wouldn't have been. And the main lesson that's come out of the '30s is that, when FDR tried to balance the budget in '36 and '37, that created another recession, and that the true end to the Great Depression was when government demand really spiked upwards from spending during World War II. That's what we need now, is a massive infusion of government spending. To the extent it didn't work in the '30s, it was because there wasn't enough of it.

1. Terminally Non – Unique – the federal government will be spending billions of stimulus dollars for transportation infrastructure
2. US economy resilient

Zumbrun and Varghese 12 (Zumbrun and Varghese, writers at Bloomberg, 05/09/12, Bloomberg Businessweek, Fed’s Plosser says US Economy Proving Resilient to Shocks, http://www.businessweek.com/news/2012-05-09/fed-s-plosser-says-u-dot-s-dot-economy-proving-resilient-to-shocks)

Philadelphia Federal Reserve Bank President Charles Plosser said the U.S. economy has proven “remarkably resilient” to shocks that can damage growth, including surging oil prices and natural disasters. “The economy has now grown for 11 consecutive quarters,” Plosser said today according to remarks prepared for a speech at the Philadelphia Fed. “Growth is not robust. But growth in the past year has continued despite significant risks and external and internal headwinds.” Plosser, who did not discuss his economic outlook or the future for monetary policy, cited shocks to the economy last year, including the tsunami in Japan that disrupted global supply chains, Europe’s credit crisis that has damaged the continent’s banking system and political unrest in the Middle East and North Africa. “The U.S. economy has a history of being remarkably resilient,” said Plosser, who doesn’t have a vote on policy this year. “These shocks held GDP growth to less than 1 percent in the first half of 2011, and many analysts were concerned that the economy was heading toward a double dip. Yet, the economy proved resilient and growth picked up in the second half of the year.” Plosser spoke at a conference at the Philadelphia Fed titled, “Reinventing Older Communities: Building Resilient Cities.” Urban Resilience His regional bank’s research department is working on a project to measure the resilience of different cities, to learn more about the reasons that some urban areas suffer more than others in downturns, Plosser said. He mentioned one early finding of the study: Industrial diversity increases a city’s resilience. “I do want to caution you that resilient and vibrant communities are not just about government programs or directed industrial planning by community leaders,” Plosser said. “The economic strength of our country is deeply rooted in our market- based economy and the dynamism and resilience of its citizenry.” Plosser, 63, became president of the Philadelphia Fed in August 2006 following a career in academia. He was previously dean of the graduate school of business administration at the University of Rochester.

1. Plan doesn’t cost that much – our Pavlov et. al 07 evidence indicates the operation costs of HSR will be much lower compared to airplanes.

A2: Privates

**Federal government key to jumpstart high-speed rail**

APTA February 2011 “The Case for Business Investment in High-Speed and Intercity Passenger Rail” <http://www.apta.com/resources/reportsandpublications/documents/HSRPub_final.pdf>

The Need for Projects Ripe for Public-Private Partnerships: As America looks to involve the private sector to the fullest extent possible, high-speed rail projects lend themselves well to various models, including operating contracts, concessions, and Design-Build-Operate-MaintainFinance arrangements. Around the world, support of the central government has been needed for the initial construction of the project, with the private sector assuming a large role in project delivery and operations.

#### PPPs are risky and costly

Dutzik et al, members of the Public Interest Research group, 7/19/2011 Tony, with Jordan Schendier and Phineas Baxandall. “High-Speed Rail: Public, Private or Both? Assessing the Prospects, Promise and Pitfalls of Public-Private Partnerships.”<http://uspirg.org/sites/pirg/files/reports/HSR-PPP-USPIRG-July-19-2011.pdf>

However, PPPs also come with a number of risks and costs, including: ¶ • Higher costs for capital, as well as costs related to the profits paid to private shareholders. ¶ • Heightened risk for the public once a project has begun, due to the ability of private-sector actors to hold projects hostage and demand increased subsidies or other concessions from government.¶ • The costs of hiring and retaining the lawyers, financial experts and engineers needed to protect the public interest in the negotiation of PPP agreements and to enforce those agreements over time. ¶ • Loss of control over the operation of the high-speed rail line, which can result in important transportation assets being operated primarily to boost private profit rather than best advance public needs.¶ • Delays in the early stages of a project, as government and private partners engage in the difficult and complex task of negotiating PPP agreement.

Private companies would not be able to implement high-speed rail

Coupal 12, Jon Coupal, President of the Howard Jarvis Taxpayers Association, 04-03-12, “Stunning Shift on High Speed Rail.” http://www.foxandhoundsdaily.com/2012/04/stunning-shift-on-high-speed-rail/

To recap, in 2008 voters narrowly approved a $10 billion down payment for the construction of a high speed rail network between the Bay Area and Los Angeles that promoters said would cost a total of $33.6 billion. A year later, the High Speed Rail Authority, the governing body overseeing the project, revealed that the train would actually cost $42.6 billion. Later, that estimate exploded to $98.5 billion, three times the original cost projection. Even the project’s more ardent supporters have expressed dismay at the mismanagement and lack of transparency at the High Speed Rail Authority. Particularly galling has been the failure of the Authority to advance a credible business plan. Its efforts in this regard have been amateurish at best and, at worse, slick salesmanship with no substance. It is truly sad — and unnecessary — that we’re at this point. Prior to the 2008 vote, the Reason Foundation and the Howard Jarvis Taxpayers Foundation sponsored “A Due Diligence Study” of the HSR plan which found the high speed train would cost much more than promised, possibly as much as $100 billion or even more. Corroborating the HJTF/Reason study, more recent reviews by the University of California and Legislative Analyst’s Office have cast further doubts on the feasibility of project. If this project were wholly within the purview of the private sector, it would have been terminated long ago. When private capital is at stake, there is a time at which responsible business managers grasp the folly of pouring good money after bad. Not so in the public sector — particularly as it relates to so-called “mega-projects.” Indeed, the strategy of the Authority is transparent: No matter how little sense this project makes, if they break ground and invest millions (or billions), California will have no choice but to complete the project.

A2: Trade-off

NON-UNIQUE:

Freight rail decline now – slowdown of goods and the economy

Trefis 12, Trefis, a financial community structured around trends, forecasts, and insights related to popular stocks in the U.S., 07-16-12, “CSX Earnings Will Show A Mixed Picture But Fundamentals Are Intact,” http://www.thestreet.com/story/11619289/1/csx-earnings-will-show-a-mixed-picture-but-fundamentals-are-intact.html

NEW YORK (Trefis) -- CSX(CSX\_) is going to release its quarterly results for the second quarter on Tuesday. We expect to see the results of a decline in coal freight volumes during the quarter. More from Trefis Wells Fargo's Fair Value Swells On Mortgage BusinessUtica Shale Play Is Crucial for Chesapeake: OpinionExpedia's Global Growth Soars With Asian Partnerships Real Money Previews Jim Cramer's Best Blogs Catch up on Jim Cramer's thinking on the hottest topics of the past week. Whether or not we avoid tax hikes and spending cuts in 2013, we face some hard choices. This could be partly offset by its industrial freight division as petroleum and petroleum products grew by a staggering 47.9% year-over-year during the quarter, and the automotive sector benefited heavily from a 24.6% year-over-year growth in the motor vehicle & parts freight, as per data reported by Association of American Railroads. Agricultural freight slid because of reduced grain volumes, but Intermodal freight continued its steady growth in the second quarter. We expect mixed results for CSX this quarter. Let's look in more detail the emerging trends that are expected to impact CSX's earnings and valuation. We have a $25 price estimate for CSX, which is around 10% above the current market price. (See our full analysis for CSX here.) Industrial Freight, Intermodal to Drive Growth Overall U.S. freight rail carloads have been declining quarter over quarter while intermodal freight has gradually grabbed more of the freight share at the expense of U.S. rail traffic. During the first quarter, total carloads declined by 3.2%, whereas intermodal volumes increased by 4%. This transition in U.S. freight traffic from railroad to intermodal is going to have a significant impact on CSX's first-quarter earnings as well as value because CSX derives nearly 13% value from its Intermodal freight division. It's imperative for CSX to invest heavily on intermodal facilities.

LINK-TURN:

Plan boosts the freight industry for several reasons.

Aadnesen 10, Chris Aadnesen, vice president of freight services in Austin Texas, 08-06-12, “10 Ways High-Speed Rail Will Impact the Freight Industry,” <http://www.joc.com/2010/10-ways-high-speed-rail-will-impact-freight-industry>

High-speed rail, which this year has been awarded $8 billion in stimulus grants and $2.5 billion in federal appropriations funding, promises to revolutionize our transportation system and benefit our economy in numerous ways. Many experts believe the impact of high-speed rail will rival that of the interstate highway system. Here are 10 ways high-speed rail will impact the freight industry: 1. Improved rail infrastructure In many of the planned high-speed rail corridors, freight railroads will share the right-of-way with high-speed passenger trains. Expedited upgrades to accommodate high-speed trains will include improved track and signal infrastructure — such as double-tracking and positive train control — much of which will greatly benefit freight railroads. 2. Upgraded locomotives Higher speed capabilities offered by track and signal upgrades will create demand for technological improvements to locomotives and cars that enable them to travel at faster speeds. This upgraded rolling stock will constitute a crucial element in the ongoing evolution of freight delivery technology. 3. More capacity, more revenues, more employees for freight railroads The infrastructure and technological improvements that emanate from high-speed rail will lead to increased freight capacity for freight railroads, which will enable them to increase their revenue and hire more employees. 4. More capacity for trucking companies The greater capacity of freight railroads will enable them to carry more intermodal containers in certain corridors. This will increase the freight capacity of motor carriers and railroads, giving them the potential to attract more business. 5. New players in freight hauling Some high-speed passenger train operators might seek to haul freight such as mail and parcels, as occurs in some areas of Europe. This would require changes in current agreements between freight and passenger operators, as well as changes in certain labor agreements. 6. Re-routing tracks In some instances, freight railroads may need to increase the distance between tracks used by freight railroads and high-speed passenger trains. This could involve the construction of physical barriers or, in some cases, the re-routing of tracks away from downtown areas. This may cause engineering challenges, but freight railroads will need to do everything they can to augment safety in the new high-speed universe. 7. Public outreach Freight railroads will need to ramp up their outreach and education efforts to prepare the public for higher train speeds, such as at grade crossings. The investment in this effort will help the evolution toward high-speed rail go much more smoothly for all concerned. 8. Cost-sharing benefits Freight railroads will benefit from agreements that require passenger train operators, and in some cases state departments of transportation, to share in the cost of infrastructure maintenance once upgrades are in place. 9. Looming liability issues The sharing of rights-of-way between freight railroads and high-speed passenger trains will create the potential for increased liability on the part of freight railroads in the event of accidents. To protect themselves, freight railroads must be proactive and negotiate agreements with passenger train operators that are fair to all parties 10. A blending of corporate cultures For many years, freight railroads and passenger railroads to a great extent have operated in their own worlds, steeped in their own corporate cultures. Cooperation has not always come easily. The increased cooperation that will result from the sharing of high-speed corridors will result in a sort of blending of corporate cultures. Greater cooperation will lead to ideas and innovations that will benefit the freight industry, passenger train operators and the public, reminiscent of the glory days of high-speed steam passenger trains operated by freight railroad companies. High-speed rail will impact the freight industry to a degree that will rival the impact of the interstate highway system. Improved infrastructure and technologies will benefit freight railroads in several ways, including greater capacity and higher revenue. Trucking companies will benefit from expanded capacity to transport intermodal freight via the railroads. There are hurdles to overcome, including extra steps required to ensure safety in a high-speed environment. But with greater cooperation between freight and passenger railroads, high-speed rail will help our nation expand its economy, save fuel and cut carbon emissions, to the benefit of all.

A2: States CP

**Extend our Cotey 11 evidence that says that federal investment is key to the implementation of high-speed rail. Federal funding is needed to encourage private investment in HSR.**

A2: Elections

Non-Unique:

#### Romney winning most swing states – mainstream polls wrong

**Chambers 7/16** (Dean Chambers, an Internet journalist and commentator on Examiner.com, 7.16.12, Clarity Digital Group, LLC, http://www.examiner.com/article/mitt-romney-leads-most-key-swing-states)

Romney actually leads in most of the key swing states, but that might not be indicated in some of the polls and projections done by or based on those done by the mainstream media. But an analysis of the best available polling data indicates a Romney lead in most of those states. Many of the mainstream media polls are showing results favoring President Obama overall and in swing states. Often these polls are inaccurate because they survey registered voters rather than more statistically reliable method of polling likely voters, and often they over sample Democrat voters. The recent Washington Post/ABC News poll sampled voters on a faulty assumption that Republican voters make up just 24 percent of the electorate when Rasmussen's very accurate and exhaustive surveying indicates that 35.4 percent of the electorate are Republicans.

#### Obama will lose --- unemployment numbers will crush Obama.

**CNN Money**, **7/19**/2012 (Election 2012: Economy does Obama no favors, p. <http://money.cnn.com/2012/07/19/news/economy/obama-election/>)

Unless the economy mounts a dramatic turnaround, President Obama will be forced to ask voters for a second term while the unemployment rate sits north of 8%. Any campaign consultant will tell you that's bad news for the incumbent -- and it could get worse. Robust labor market growth in the first three months of the calendar year has given way to three consecutive disappointing jobs reports. The housing market remains tied in knots. And growth is depressingly weak. Europe is mired in an intractable debt crisis that shows few signs of easing. At home, the impending fiscal cliff has the potential to unsettle businesses to the point where they are reluctant to make investments or hiring decisions. The resulting economic outlook -- especially from the Obama campaign's perspective -- is not especially rosy. With only four monthly jobs reports remaining before Election Day, it now seems unlikely that unemployment will drop below 8%. The current unemployment rate is 8.2%. Patrick Sims, a director at Hamilton Place Strategies, said that getting below 8.0% is "not going to happen" by Election Day.

No Link:

#### Massive public support for HSR

**Butman**, 12/1/**2010** (Jim, Survey shows public support for high-speed rail, Biz Times, p. http://www.biztimes.com/article/20101201/ENEWSLETTERS02/312019989/)

Nearly two-thirds of American adults (62 percent) said they would definitely or probably use high-speed rail service for leisure or business travel if it were an option, according to a survey from the Washington-based American Public Transportation Association (APTA). The survey, taken among 24,711 adults, also asked how important various factors would be in choosing high-speed rail service. Ninety-one percent of respondents said high-speed rail should offer shorter travel times compared to driving to their destinations; 91 percent said the rail service should be less expensive than flying; 89 percent said it should be less expensive than driving; and 85 percent said the rail service should integrate with local public transit so they could avoid using rental cars and cabs, and paying parking fees. The APTA wants Congress to invest $50 billion over the next six years to build a high-speed rail network. "In most political circles, garnering nearly two-thirds support for a forward-thinking vision like high-speed rail would be considered a landslide," said APTA president William Millar said.. "We strongly support the government's commitment to implementing high-speed rail. It will provide more options for travelers, as well as create jobs and be a strong boost for the local economy."

High-speed rail popular with public

Walsh 12, Sean Collins Walsh, Daily News Staff Writer, 07-12-12, “Pols block high-speed rail that Americans want, U.S. transportation secretary says,” http://articles.philly.com/2012-07-12/news/32649338\_1\_high-speed-rail-high-speed-rail-high-speed-train

U.S. TRANSPORTATION Secretary Ray LaHood blasted America's "unenlightened elected officials" on Wednesday while speaking in Philadelphia at the first international conference on high-speed rail to be held in the United States. Those elected officials, of course, did not include his boss, President Obama. "Common, ordinary citizens are enlightened about this issue," said LaHood, referencing polls that show a majority of Americans want bullet trains. "The bottom line really is this: High-speed rail and passenger rail and the kind of investment that needs to be made cannot be done unless there are people of vision" in government. With just one high-speed train, America lags behind many countries in Europe and Asia that have invested in extensive systems for decades. Organizers said bringing the World Congress on High Speed Rail to Philadelphia was meant to help encourage U.S. development of the new technology. LaHood, a former Republican congressman from Illinois, praised Obama's support for high-speed trains, including the $8 billion set aside for the industry in the 2009 American Recovery and Reinvestment Act, or "stimulus" program. Federal funds will help California build a rail line to carry bullet trains from Los Angeles to San Francisco, a recently approved state project expected to cost more than $168 billion. In his remarks at the Pennsylvania Convention Center, LaHood touted his victory in California and criticized Republican governors in Florida and Ohio who have rejected federal aid for high-speed projects due to state budgetary constraints. Right now, Amtrak's Acela line in the Northeast Corridor is America's only high-speed train, running from Boston to Washington and stopping at 30th Street Station. Completed in the 1990s, the project was mired in political and technical setbacks, but the line has risen in popularity since opening in 2000. Much slower than some bullet trains abroad, Acela's top speed is 150 mph, and it averages about 70. But it is still faster and cheaper than flying between most destinations in the Northeast, making it popular for business travel. The Obama administration has plans for 80 percent of Americans to have access to high-speed rail by 2035, although many observers say that figure is unrealistic. "I'm very proud of the work that we have done, but we have a long way to go, a very long way to go," LaHood said.

The public perceives transportation infrastructure as job creators.

The Rockefeller Foundation 2011 (The Rockefeller Foundation Infrastructure Survey, Conducted by Hart Research Associates and Public Opinion Strategies, p. 2)

The public understands the economic benefits of infrastructure improvement. • Four in five (80%) voters agree that federal funding to improve and modernize transportation “will boost local economies and create millions of jobs from construction to manufacturing to engineering.” Just 19% disagree with this. • And 79% agree that “in order for the United States to remain the world’s top economic superpower we need to modernize our transportation infrastructure and keep it up to date.” Again, 19% disagree.